

DANMENG SHUAI

Associate Professor

Department of Civil and Environmental Engineering • The George Washington University
Suite 3530, Science and Engineering Hall, 800 22nd Street NW, Washington DC 20052
Phone: 202-994-0506 • Email: danmengshuai@gwu.edu • <http://materwatersus.weebly.com>

PROFESSIONAL

2019-Present Associate Professor, **The George Washington University**
Department of Civil and Environmental Engineering

2013-2019 Assistant Professor, **The George Washington University**
Department of Civil and Environmental Engineering

2012-2013 Post-Doctoral Research Associate, **University of Iowa**
Department of Civil and Environmental Engineering

2007-2012 Graduate Research and Teaching Assistant,
University of Illinois at Urbana-Champaign
Department of Civil and Environmental Engineering

2005-2007 Graduate Research Assistant, **Tsinghua University**
Department of Environmental Sciences and Engineering

EDUCATION

2012 **University of Illinois at Urbana-Champaign, USA**
Ph.D. in Environmental Engineering

- Dissertation title: Development of sustainable Pd-based catalysts for removal of persistent contaminants from drinking water
- Advisors: Charles J. Werth and John R. Shapley
- Committee: Timothy J. Strathmann and William F. Schneider

2007 **Tsinghua University, P. R. China**
M.E. in Environmental Sciences and Engineering

- Advisor: Gang Yu

2005 **Tsinghua University, P. R. China**
B.E. in Environmental Sciences and Engineering

RESEARCH INTERESTS

Nano-Microbe Crosstalk

We aim to understand the fundamentals of how microbes interact with (catalytic) nanomaterials, and leverage these interactions for beneficial engineering applications, including but not limited to environmental pollution control and remediation, renewable energy production, food quality and safety improvement, and infectious disease prevention.

HONORS AND AWARDS

2022 40 under 40 Recognition Program for American Academy of Environmental Engineers and Scientists, 11/2022.

2019 CAPEES/Nanova Young Investigator Award, 04/2019.

2018 GW School of Engineering and Applied Sciences Outstanding Junior Researcher Award, 04/2018.

2015 Civil and Environmental Engineering Professor of the Year, The Engineer's Council at GW, 02/2015.

NANO 2010 Student Platform Presentation Award, 3rd place, Clemson University, USA, 08/2010.

NSF-AEESP Grand Challenge Student Paper Award, AEESP Conference, Iowa City, IA, USA, 07/2009.

Excellent Student Scholarship, Department of Environmental Science and Engineering, Tsinghua University, P. R. China, 2005-2006.

Tsinghua University–DuPont Scholarship, Tsinghua University, P. R. China, 2003-2004.

Tsinghua University–Beijing Commercial Bank Scholarship, Tsinghua University, P. R. China, 2002-2003.

Excellent Student Scholarship, Department of Environmental Science and Engineering, Tsinghua University, P. R. China, 2001-2002.

SPONSORED RESEARCH PROJECTS

Extramural Research Grants

Total at The George Washington University = \$4,131,835

17. US Department of Agriculture | PI | 01/2022-12/2024 \$750,000
Persistence and Inactivation of Vesicle-Cloaked Enteric Virus Clusters in Agricultural Reuse Water
Co-PI: Yun Shen at University of California, Riverside. \$750,000 as total.
16. US Department of Agriculture | Co-PI | 01/2022-12/2025 \$169,812
Partnership: Biomass-based Nanocomposite Electrodes with Insertion Materials for Desalinating Brackish Agricultural Drainage
PI: Xitong Liu at The George Washington University and co-PI: Pei Dong at George Mason University. \$744,000 as total.
15. US Department of Agriculture | PI | 01/2022-01/2025 \$728,000
Partnership: Development of Single- and Double-Atom Catalysts for Treating Agricultural Wastewater
Co-PIs: Hanning Chen at American University and Feng Lin at Virginia Polytechnic Institute and State University. \$728,000 as total.
14. National Institutes of Health | PI | 09/2021-08/2023 \$489,586
Vesicle-Cloaked Virus Clusters as Emerging Pathogens: Will They Challenge Current Disinfection Paradigm?
PI: Yun Shen at University of California, Riverside. \$489,586 as total.
13. Environmental Protection Agency | Consultant | 08/2021-08/2024 \$12,500
Novel Quantitative Methods for Indigenous Viruses in Wastewater: Improving the Assessment of Water Reuse Treatment Performance
PI: Tiong Gim Aw at Tulane University and co-PIs: Joan Rose at Michigan State University and Yun Shen at University of California, Riverside. \$1,239,240 as total.
12. US Department of Agriculture | Co-PI | 01/2021-12/2023 \$94,500
Development of a Visible-Light-Responsive Antimicrobial Packaging System for Improving Food Quality and Safety
PI: Haibo Huang and co-PIs: Young-Tek Kim, Yun Yin, Monica Ponder, all at Virginia Polytechnic Institute and State University. \$471,210 as total.
11. National Science Foundation | PI | 09/2020-08/2023 \$220,000
Collaborative Research: Presence, Persistence, and Inactivation of Vesicle-Cloaked Rotavirus or Norovirus Clusters in Water
PI: Yun Shen at University of California, Riverside. \$420,000 as total.
10. National Science Foundation | PI | 06/2020-05/2023 \$110,000
Collaborative Research: Bioinspired Catalysts with Earth-Abundant Metals for Reductive Treatment of Waterborne Contaminants
PIs: Jinyong Liu at University of California, Riverside and Yin Wang at University of Wisconsin-Milwaukee. \$419,999 as total.

9. National Science Foundation | PI | 05/2020-04/2021 \$70,000
 RAPID: Collaborative Research: Electrospun Nanofibrous Air Filters for Coronavirus Control
 PI: Yun Shen at University of California, Riverside. \$200,000 as total.
8. National Aeronautics and Space Administration | STTR Partner | 08/2019-08/2020 \$40,000
 Nanoporous Carbon Nitride Photocatalyst Based Water Recovery System
 Small Business Technology Transfer (STTR) Program Phase I. PI: Jordan Terrazas at CertainTech, Inc.
 \$124,990 as total.
7. National Science Foundation | Co-PI | 08/2019-07/2022 \$171,721
 Collaborative Research: Interactions between Photoreactive 2D Nanomaterials and Biofilms
 PIs: Yun Shen at The George Washington University and Na Wei at the University of Notre Dame.
 \$531,123 as total.
6. National Science Foundation | PI | 09/2018-02/2019 \$50,000
 I-Corps: Visible-light-responsive Graphitic Carbon Nitride for Air and Water Purification and
 Antimicrobial Applications
 Entrepreneurial Leads: Qinmin Zheng and Ruochen Zhu, Technical Lead: Hongchen Shen, all Ph.D.
 students of the PI; and Industry Mentor: Henrik de Gyor
5. National Science Foundation | PI | 07/2018-06/2022 \$310,000
 Collaborative Research: Integrated Experimental and Computational Studies for Understanding the
 Interplay of Photoreactive Materials and Persistent Contaminants
 Co-PI: Hanning Chen at The George Washington University and PI: Nan Jiang at the University of Illinois
 at Chicago. \$549,546 as total.
4. US Department of Agriculture | Co-PI | 07/2018-06/2022 \$93,517
 Synergistic Integration of the Biogranulation Theory into Advanced Membrane Bioreactors for Value-
 Added Chemicals Production from Food Waste
 PI: Haibo Huang and co-PI: Zhiwu Wang, both at Virginia Polytechnic Institute and State University.
 \$327,517 as total.
3. US Department of Agriculture | PI | 07/2017-06/2021 \$450,200
 Development of Graphitic-Carbon-Nitride-Based Antimicrobial Nanomaterials for Safe Food Processing
 and Packaging
 Co-PIs: Santiago D. Solares, Hanning Chen, and Ganhui Lan at The George Washington University.
2. National Science Foundation | PI | 09/2016-08/2020 \$166,000
 SusChEM: Collaborative Research: Development of Multifunctional Reactive Electrochemical Membranes
 for Biomass Recovery with Fouling Reduction, Water Reuse, and Cell Pretreatment
 PIs: Brian P. Chaplin at the University of Illinois at Chicago, and Wen Zhang at New Jersey Institute of
 Technology. \$486,000 as total.
1. National Science Foundation | PI | 09/2014-08/2018 \$205,999
 SusChEM: Collaborative Research: Development and Application of Piezoelectric Nanoheterostructures
 to Reduce the Chemical and Energy Demand of Water Treatment
 PIs/Co-PIs: Tianshu Li at The George Washington University, David M. Cwiertny at the University of
 Iowa, and Jin Nam and Nosang V. Myung at the University of California-Riverside. \$549,303 as total.

Intramural Research Grants

Total at The George Washington University = \$207,417

10. GW, University Facilitating Fund | PI | 10/2022-06/2023 \$20,000

- Development of Photoreactive Air Filters for Controlling SARS-CoV-2 Airborne Transmission
9. GW, University Facilitating Fund | PI | 07/2021-06/2022 \$17,000
Prevent SARS-CoV-2 Transmission via Fomites: Indoor-Light-Powered Effective and Self-Cleaning Photoreactive Coatings for Biomedical Applications
 8. GW, Cross-Disciplinary Research Fund | PI | 07/2020-06/2021 \$50,000
Photocatalytic Graphitic Carbon Nitride for Inhibiting Biofilm Development and Encrustations on Indwelling Urinary Catheters
Co-PI: John Lafleur (Emergency Medicine) and Santiago D. Solares (Mechanical and Aerospace Engineering) at The George Washington University.
 7. GW, University Facilitating Fund | PI | 07/2019-06/2020 \$25,000
Persistence and Inactivation of Vesicle-Cloaked Virus Clusters in Water Purification
 6. GW, Duke Energy Renewables Innovation Fund | PI | 01/2019-12/2019 \$30,417
Sunlight-Drive Photocatalysis for Sustainable Water Purification and Value-Added Chemical Production by Graphitic Carbon Nitride
Co-PIs: Hanning Chen (Chemistry) and Yun Shen (Environmental and Occupational Health) at The George Washington University.
 5. GW, Cross-Disciplinary Research Fund | PI | 07/2018-06/2019 \$40,000
Biom mineralized Human Viruses: Fate and Inactivation in Nutrient Recovery
Co-PIs: Santiago D. Solares (Mechanical and Aerospace Engineering) and Mimi Ghosh (Epidemiology and Biostatistics) at The George Washington University.
 4. GW, CCAS, Innovative Cross-Disciplinary Excellence Award | Co-PI | 07/2016-06/2017 \$10,000
Graphitic Carbon Nitride Based Lithium Sulfur Batteries
PI: Michael J. Wagner (Chemistry) at The George Washington University. \$20,000 as total.
 3. GW, University Facilitating Fund | PI | 07/2014-06/2015 \$15,000
Development of Electro-Reactive Micro- and Ultra-Filtration Membranes with Enhanced Contaminant Rejection and Destruction
 2. UIowa, Center for Global and Regional Environmental Research | Co-PI | 07/2013-06/2014
Use of Waste Heat to Sustainably Generate High Quality Effluent for Aquifer Recharge
PI: David M. Cwiertny (Civil and Environmental Engineering) at the University of Iowa. \$30,000 as total.
 1. UIowa, Center for Health Effects of Environmental Contamination | Co-PI | 07/2013-06/2014
Point-of-Use Electrocatalytic Filters for Reduction of Persistent Contaminants from Drinking Water
PI: David M. Cwiertny and co-PI: Richard L. Valentine, both in the Department of Civil and Environmental Engineering at the University of Iowa. \$30,000 as total.

REFEREED JOURNAL PUBLICATIONS

indicates my graduate students or post-doctoral researchers, * indicates me as the corresponding author.

Published

46. **Li, M.,[#] Zheng, Q.,[#] Durkin, D. P., Chen, H.,[‡] Shuai, D.^{‡*}** Environmental Application of Chlorine-Doped Graphitic Carbon Nitride: Continuous Solar-driven Photocatalytic Production of Hydrogen Peroxide. *J. Hazard. Mater.* 2022, 436, 129251. (**† Equal Contribution, ‡ Co-corresponding Author**)

45. **Zhang, M.**,[#] Ghosh, S., **Li, M.**,[#] Altan-Bonnet, N.,[‡] **Shuai, D.**^{**} Vesicle-Cloaked Rotavirus Clusters are Environmentally Persistent and Resistant to Free Chlorine Disinfection. *Environ. Sci. Technol.* 2022, 56, 12, 8475-8484. (**‡ Co-corresponding Author**)
44. **Zhang, M.**,[#] Altan-Bonnet, N., Shen, Y., **Shuai, D.**^{*} Waterborne Human Pathogenic Viruses in Complex Microbial Communities: Environmental Implication on Virus Infectivity, Persistence, and Disinfection. *Environ. Sci. Technol.* 2022, 56, 9, 5381-5389.
43. **Shen, H.**,^{##} Han, M., Shen, Y., **Shuai, D.**^{**} Electrospun Nanofibrous Membranes for Controlling Airborne Viruses: Present Status, Standardization of Aerosol Filtration Tests, and Future Development. *ACS Environ. Au.* 2022, 2, 4, 290-309. (**‡ Co-corresponding Author**, Selected as the **Outside Front Cover**)
42. **Shen, H.**,^{##} **Zhou, Z.**,^{##} **Wang, H.**,^{##} **Chen, J.**,[#] **Zhang, M.**,[#] Han, M., Shen, Y.,[‡] **Shuai, D.**^{**} Photosensitized Electrospun Nanofibrous Filters for Capturing and Killing Airborne Coronaviruses under Visible Light Irradiation. *Environ. Sci. Technol.* 2022, 56, 7, 4295-4304. (**† Equal Contribution, ‡ Co-corresponding Author**)
41. **Shen, H.**,[#] Gulbrandson, A. J., Park, S., **Li, M.**,[#] **Shuai, D.**, Trulove, P. C., Durkin, D. P. Natural Fiber Welded Antimicrobial Textiles using Lignocellulose Containing Silver Nanoparticle. *Macromol. Mater. Eng.* 2022, 2100872.
40. **Li, M.**,[#] Liu, D., Chen, X., Yin, Z., **Shen, H.**,[#] Aiello, A., McKenzie, K. R., Jr., Jiang, N., Li, X., Wagner, M. J., Durkin, D. P.,[‡] Chen, H.,[‡] **Shuai, D.**^{**} Radical-Driven Decomposition of Graphitic Carbon Nitride Nanosheets: Light Exposure Matters. *Environ. Sci. Technol.* 2021, 55, 18, 12414-12423. (**‡ Co-corresponding Author**)
39. Zhang, C., Li, Y., **Li, M.**,[#] **Shuai, D.**, Zhou, X., Xiong, X., Wang, C., Hu, Q. Continuous Photocatalysis via Photo-charging and Dark-discharging for Sustainable Environmental Remediation: Performance, Mechanism, and Influencing Factors. *J. Hazard. Mater.* 2021, 420, 126607.
38. **Zhou, Z.**,[#] **Li, M.**,[#] Kuai, C., Zhang, Y., Smith, V. F., Lin, F., Aiello, A., Durkin, D. P.,[‡] Chen, H.,[‡] **Shuai, D.**^{**} Fe-based Single-Atom Catalysis for Oxidizing Contaminants of Emerging Concern by Activating Peroxides. *J. Hazard. Mater.* 2021, 418, 126294. (**‡ Co-corresponding Author**)
37. **Shen, H.**,^{##} **Zhou, Z.**,^{##} **Wang, H.**,^{##} **Zhang, M.**,[#] Han, M., Durkin, D. P., **Shuai, D.**,^{**} Shen, Y.[‡] Development of Electrospun Nanofibrous Filters for Controlling Coronavirus Aerosols. *Environ. Sci. Technol. Lett.* 2021, 8, 7, 545-550. (**† Equal Contribution, ‡ Co-corresponding Author**)
36. **Zhang, M.**,[#] Ghosh, S., Kumar, M., Santiana, M., Bleck, C. K. E., Chaimongkol, N., Altan-Bonnet, N.,[‡] **Shuai, D.**^{**} Emerging Pathogenic Unit of Vesicle-Cloaked Murine Norovirus Clusters is Resistant to Environmental Stresses and UV₂₅₄ Disinfection. *Environ. Sci. Technol.* 2021, 55, 9, 6197-6205. (**‡ Co-corresponding Author**)
35. **Shen, H.**,[#] Durkin, D. P., Aiello, A., Diba, T., Lafleur, J., Zara, J. M., Shen, Y.,[‡] **Shuai, D.**^{**} Photocatalytic Graphitic Carbon Nitride-Chitosan Composites for Pathogenic Biofilm Control under Visible Light Irradiation. *J. Hazard. Mater.* 2021, 408, 124890. (**‡ Co-corresponding Author**)
34. Zhang, C., Li, Y., **Shen, H.**,[#] **Shuai, D.** Simultaneous Coupling of Photocatalytic and Biological Processes: A Promising Synergistic Alternative for Enhancing Decontamination of Recalcitrant Compounds in Water. *Chem. Eng. J.* 2020, 403, 126365.
33. **Zheng, Q.**,[#] Aiello, A., Choi, Y.,[†] Tarr, K.,[†] **Shen, H.**,[#] Durkin, D. P.,[‡] **Shuai, D.**^{**} 3D Printed Photoreactor with Immobilized Graphitic Carbon Nitride: A Sustainable Platform for Solar Water Purification. *J. Hazard. Mater.* 2020, 399, 123097. (**† Equal Contribution, ‡ Co-corresponding Author**)
32. Durkin, D. P., **Ye, T.**,[#] De Long, H. C., **Shuai, D.**, Trulove, P. C. Preferential Leaching of Indium Metal During Room Temperature Ionic Liquid Processing of Pd-In Nanoparticle-Biopolymer Composites. *Mater. Chem. Phys.* 2020, 249, 123179.
31. Chang, X., Yao, X., Ding, N., Yin, X., **Zheng, Q.**,[#] Lu, S., **Shuai, D.**, Sun, Y. Photocatalytic Degradation of Trihalomethanes and Haloacetonitriles on Graphite Carbon Nitride under Visible Light Irradiation. *Sci. Total Environ.* 2019, 682, 200-207.

30. **López-Guerra, E. A.,[#] Shen, H.,[#] Solares, S. D.,[‡] Shuai, D.^{‡*}** Acquisition of Time-frequency Localized Mechanical Properties of Biofilms and Single Cells with High Spatial Resolution. *Nanoscale* 2019, 11, 8918-8929. (**‡ Co-corresponding Author**)
29. Zhang, C., **Zhang, M.,[#] Li, Y., Shuai, D.** Visible-light-driven Photocatalytic Disinfection of Human Adenovirus by a Novel Heterostructure of Oxygen-doped Graphitic Carbon Nitride and Hydrothermal Carbonation Carbon. *Appl. Catal. B* 2019, 248, 11-21.
28. **Shen, H.,[#] López-Guerra, E. A.,[#] Zhu, R.,[#] Diba, T., Zheng, Q.,[#] Solares, S. D., Zara, J. M., Shuai, D.,^{‡*} Shen, Y.[‡]** Visible-light-responsive Photocatalyst of Graphitic Carbon Nitride for Pathogenic Biofilm Control. *ACS Appl. Mater. Interfaces* 2019, 11 (1), 373–384. (**‡ Co-corresponding Author**)
27. Zhang, C., Li, Y., **Shuai, D.**, Shen, Y., Xiong, W., Wang, L. Graphitic Carbon Nitride (g-C₃N₄)-based Photocatalysts for Water Disinfection and Microbial Control: A Review. *Chemosphere* 2019, 214, 462-479.
26. **Zheng, Q.,[#] Xu, E., Park, E., Chen, H., Shuai, D.*** Looking at the Overlooked Hole Oxidation: Photocatalytic Transformation of Organic Contaminants on Graphitic Carbon Nitride under Visible Light Irradiation. *Appl. Catal. B* 2019, 240, 262-269.
25. Zhang, C., Li, Y., **Shuai, D.**, Shen, Y., Wang, D. Progress and Challenges in Photocatalytic Disinfection of Waterborne Viruses: A Review to Fill Current Knowledge Gaps. *Chem. Eng. J.* 2019, 355 (1), 399-415.
24. **Ye, T.,[#] Banek, N. A., Durkin, D. P., Hu, M., Wang, X., Wagner, M. J., Shuai, D.*** Nitrogen-Functionalized Activated Carbon Support for Pd-based Catalysis: Mechanism and Application for Oxyanion Reduction and Water Purification. *ACS Appl. Nano Mater.* 2018, 1 (12), 6580–6586.
23. **Zhu, R.,[#] Díaz, A. J., Shen, Y., Qi, F., Chang, X., Durkin, D. P., Sun, Y., Solares, S. D.,[‡] Shuai, D.^{‡*}** Mechanism of Humic Acid Fouling in a Photocatalytic Membrane System. *J. Membr. Sci.* 2018, 563, 531-540. (**‡ Co-corresponding Author**)
22. Zhang, C., Li, Y., **Shuai, D.**, Zhang, W., Niu, L., Wang, L., Zhang, H. Visible-light-driven, Water-surface-floating Antimicrobials Developed from Graphitic Carbon Nitride and Expanded Perlite for Water Disinfection. *Chemosphere* 2018, 208, 84-92.
21. Durkin, D. P.,[†] **Ye, T.,^{†#} Choi, J., Livi, K. J. T., De Long, H. C., Trulove, P. C., Fairbrother, D. H., Haverhals, L. M.,[‡] Shuai, D.^{‡*}** Sustainable and Scalable Natural Fiber Welded Palladium-Indium Catalysts for Nitrate Reduction. *Appl. Catal. B* 2018, 221, 290-301. (**† Equal Contribution, ‡ Co-corresponding Author**)
20. Zhu, W.,[†] **Ye, T.,^{†#} Lee, S.-J., Cui, H., Miao, S., Zhou, X., Shuai, D., Zhang, L. G.** Enhanced Neural Stem Cell Functions in Conductive Annealed Carbon Nanofibrous Scaffolds with Electrical Stimulation. *Nanomedicine* 2018, 14 (7), 2485-2494. (**† Equal Contribution**)
19. **Ye, T.,[#] Durkin, D. P., Banek, N. A., Wagner, M. J., Shuai, D.*** Graphitic Carbon Nitride Supported Ultrafine Pd and Pd-Cu Catalysts: Enhanced Reactivity, Selectivity, and Longevity for Nitrite and Nitrate Hydrogenation. *ACS Appl. Mater. Interfaces* 2017, 9 (33), 27421-27426.
18. **Zheng, Q.,[#] Shen, H.,[#] Shuai, D.*** Advances and Challenges of Graphitic Carbon Nitride as a Visible-Light-Responsive Photocatalyst for Sustainable Water Purification. *Environ. Sci.: Water Res. Technol.* 2017, 3, 982-1001. (Selected as **Outside Front Cover**)
17. Jadbabaei, N., Slobodjian, R. J., **Shuai, D.**, Zhang, H. Catalytic Reduction of 4-Nitrophenol by Palladium-Resin Composites. *Appl. Catal. A* 2017, 543, 209-217.
16. Jadbabaei, N., **Ye, T.,[#] Shuai, D.**, Zhang, H. Development of Palladium-Resin Composites for Catalytic Hydrodechlorination of 4-Chlorophenol. *Appl. Catal. B* 2017, 205, 576-586.
15. **Zheng, Q.,[#] Durkin, D. P., Elenewski, J. E., Sun, Y., Banek, N. A., Hua, L., Chen, H., Wagner, M. J., Zhang, W., Shuai, D.*** Visible-Light-Responsive Graphitic Carbon Nitride: Rational Design and Photocatalytic Applications for Water Treatment. *Environ. Sci. Technol.* 2016, 50 (23), 12938-12948.
14. Li, Y., Zhang, C., **Shuai, D.**, Naraginti, S., Wang, D., Zhang, W. Visible-light-driven photocatalytic inactivation of MS2 by metal-free g-C₃N₄: Virucidal performance and mechanism. *Water Res.* 2016, 106 (1), 249-258.

13. Durkin, D. P., **Ye, T.**,[#] Larson, E. G., Haverhals, L. M., Livi, K. J. T., De Long, H. C., Trulove, P. C., Fairbrother, D. H., **Shuai, D.*** Lignocellulose Fiber- and Welded Fiber- Supports for Palladium Based Catalytic Hydrogenation: A Natural Fiber Welding Application for Water Treatment. *ACS Sustain. Chem. Eng.* 2016, 4 (10), 5511-5522.
12. **Ye, T.**,[#] Durkin, D. P., Hu, M., Wang, X., Banek, N. A., Wagner, M. J., **Shuai, D.*** Enhancement of Nitrite Reduction Kinetics on Electrospun Pd-Carbon Nanomaterial Catalysts for Water Purification. *ACS Appl. Mater. Interfaces* 2016, 8 (28), 17739-17744.
11. Hua, L.; Guo, L.; Thakkar, M.; Wei, D.; Agb akpe, M.; Kuang, L.; Magpile, M.; Chaplin, B. P.; Tao, Y.; **Shuai, D.**; Zhang, X.; Mitra, S.; Zhang, W. Effects of Anodic Oxidation of a Substoichiometric Titanium Dioxide Reactive Electrochemical Membrane on Algal Cell Destabilization and Lipid Extraction. *Bioresour. Technol.* 2016, 203, 112-117.
10. Nalbandian, M. J., Greenstein, K. E., **Shuai, D.**, Zhang, M., Choa, Y.-H., Parkin, G. F., Myung, N. V., Cwiertny, D. M. Tailored Synthesis of Photoactive TiO₂ Nanofibers and Au/TiO₂ Nanofiber Composites: Structure and Reactivity Optimization for Water Treatment Applications. *Environ. Sci. Technol.* 2015, 49 (3), 1654-1663.
9. **Shuai, D.**, McCalman, D. C., Choe, J. K., Shapley, J. R., Schneider, W. F., Werth, C. J. Structure Sensitivity Study of Waterborne Contaminant Hydrogenation Using Shape- and Size- Controlled Pd Nanoparticles. *ACS Catal* 2013, 3, 453-463.
8. Zhang, R.,[†] **Shuai, D.**,[†] Guy, K. A., Strathmann, T. J., Shapley, J. R., Werth, C. J. Elucidation of Nitrate Reduction Mechanisms on a Pd-In Bimetallic Catalyst Using Isotope Labeled Nitrogen Species. *ChemCatChem* 2013, 5 (1), 313-321. (**† Equal Contribution**)
7. **Shuai, D.**, Choe, J. K., Shapley, J. R., Werth, C. J. Enhanced Activity and Selectivity of Carbon Nanofiber Supported Pd Catalysts for Nitrite Reduction. *Environ. Sci. Technol.* 2012, 46 (5), 2847-2855.
6. **Shuai, D.**, Wang, C., Genç, A., Werth, C. J. A New Geometric Method Based on 2D Transmission Electron Microscopy for Analysis of Interior versus Exterior Pd Loading on Hollow Carbon Nanofibers. *J. Phys. Chem. Lett.* 2011, 2 (9), 1082-1087.
5. **Shuai, D.**, Chaplin, B. P., Shapley, J. R., Menendez, N. P., McCalman, D. C., Schneider, W. F., Werth, C. J. Enhancement of Oxyanion and Diatrizoate Reduction Kinetics Using Selected Azo Dyes on Pd-Based Catalysts, *Environ. Sci. Technol.* 2010, 44 (5), 1773-1779.
4. Deng, S., **Shuai, D.**, Yu, Q., Huang, J., Yu, G. Selective Sorption of Perfluorooctane Sulfonate on Molecularly Imprinted Polymer Adsorbents, *Front. Environ. Sci. Eng. China* 2009, 3 (2), 171-177.
3. **Shuai, D.**, Deng, S., Yu, G., Yu, Q., Preparation and Characterization of Nano-polymeric Adsorbents for PFOS Removal from Drinking Water, *Environmental Pollution & Control (in Chinese)* 2007, 8, 588-591.
2. **Shuai, D.**, Yang, B., Yu, G., Effects of Surfactants and HPCD on 2,4,5-PCB Electroreduction Using a Pd Loaded Activated Carbon Felt Electrode. *Environmental Chemistry (in Chinese)* 2007, 4, 457-460.
1. Yang, B., Yu, G., **Shuai, D.** Electrocatalytic Hydrodechlorination of 4-Chlorobiphenyl in Aqueous Solution Using Palladized Nickel Foam Cathode. *Chemosphere* 2007, 67 (7), 1361-1367.

INVITED EDITORIAL PUBLICATIONS

[#] indicates my graduate students or post-doctoral researchers, * indicates me as the corresponding author.

6. **Zhu, R.**,[#] Tan, D. T., **Shuai, D.*** Research Highlights: Applications of Atomic Force Microscopy in Natural and Engineered Water Systems. *Environ. Sci.: Water Res. Technol.* 2016, 2, 415-420.
5. Gomez-Smith, C. K., Tan, D. T., **Shuai, D.** Research Highlights: Functions of the Drinking Water Microbiome – from Treatment to Tap. *Environ. Sci.: Water Res. Technol.* 2016, 2, 245-249.
4. **Zheng, Q.**,[#] Tan, D. T., **Shuai, D.*** Research Highlights: Research Highlights: Visible Light Driven Photocatalysis and Photoluminescence and Their Applications in Water Treatment. *Environ. Sci.: Water Res. Technol.* 2016, 2, 13-16.

3. Tan, D. T., **Shuai, D.** Research Highlights: advances and challenges in developing mainstream anammox treatment. *Environ. Sci.: Water Res. Technol.* 2015, 1, 546-549.
2. **Ye, T.,# Shuai, D.*** Research Highlights: Under-Recognized Precursors and Sources for Disinfection Byproduct Formation. *Environ. Sci.: Water Res. Technol.* 2015, 1, 405-407.
1. Tan, D. T., **Shuai, D.** Research Highlights: Antibiotic Resistance Genes: from Wastewater into the Environment. *Environ. Sci.: Water Res. Technol.* 2015, 1, 264-267.

CONFERENCE PRESENTATIONS

indicates my graduate students or post-doctoral researchers, * indicates me as the corresponding author.

86. **Shuai, D.*** Vesicle-cloaked Virus Clusters as Emerging Pathogens in the Environment and Their Public Health Concerns. ASV's 41st Annual Meeting, Madison, WI, USA, 07/2022. ORAL
85. **Shuai, D.*** Electrospun Nanofibrous Air Filters for Controlling Airborne Transmission of COVID-19. AEESP Conference, St. Louis, MO, USA, 06/2022. ORAL, **Invited** for Aerosol Science and Engineering and Public Health: Focus on COVID-19 workshop.
84. **Shen, H.,# Shuai, D.*** Visible-Light-Responsive Graphitic Carbon Nitride-Chitosan Composites for Pathogenic Biofilm Control. AEESP Conference, St. Louis, MO, USA, 06/2022. POSTER
83. **Chen, J.,# Zhou, Z.,# Shen, H.,# Han, M., Shen, Y., Shuai, D.*** Electrospun Nanofibrous Air Filters for Controlling Airborne Transmission of COVID-19. AEESP Conference, St. Louis, MO, USA, 06/2022. ORAL
82. **Li, M.,# Liu, D., Chen, X., Yin, Z., Shen, H.,# Aiello, A., McKenzie, K. R., Jr., Jiang, N., Li, X., Wagner, M. J., Durkin, D. P., Chen, H., Shuai, D.*** Radical-Driven Decomposition of Graphitic Carbon Nitride: A Study on Transformation Mechanism and Nanomaterial Toxicity. AEESP Conference, St. Louis, MO, USA, 06/2022. ORAL
81. **Zhou, Z.,# Shuai, D.*** Fe-Based Double-Atom Catalysts Boosting Electron-Transfer for Disinfecting Coronaviruses. AEESP Conference, St. Louis, MO, USA, 06/2022. POSTER
80. **Shuai, D.,* Zhang, M.,# Altan-Bonnet, N.** Vesicle-Cloaked Virus Clusters as Emerging Pathogens: Will They Challenge the Current Disinfection Paradigm? AEESP Conference, St. Louis, MO, USA, 06/2022. ORAL
79. **Li, M.,# Durkin, D. P., Waller, G., Yu, Y., Men, Y., Ye, T., Chen, H., Shuai, D.*** Stability and Durability of Graphitic Carbon Nitride as a Visible-Light-Responsive Catalyst. Gordon Research Conference: Catalysis, New London, NH, USA, 06/2022. POSTER
78. **Li, M.,# Durkin, D. P., Waller, G., Yu, Y., Men, Y., Ye, T., Chen, H., Shuai, D.*** Stability and Durability of Graphitic Carbon Nitride as a Visible-Light-Responsive Catalyst. Gordon Research Seminar: Catalysis, New London, NH, USA, 06/2022. POSTER
77. **Zhou, Z.,# Shuai, D.*** Fe-Based Double-Atom Catalysts Boosting Electron-Transfer for Disinfecting Coronaviruses. ASM Microbe 2022, Washington, DC, USA, 06/2022. POSTER
76. **Shen, H.,# Shuai, D.*** Photosensitized Electrospun Nanofibrous Filters for Capturing and Killing Airborne Coronaviruses under Visible Light Irradiation, 10th Nano Conference, 11/2021. POSTER
75. **Li, M.,# Shuai, D.*** Insight into the Role of Light Exposure in Radical-Driven Decomposition of Graphitic Carbon Nitride, 10th Nano Conference, 11/2021. POSTER
74. **Shuai, D.*** Leveraging Nanotechnology for Controlling SARS-CoV-2 Airborne Transmission, 10th Nano Conference, 11/2021. ORAL, **Invited**.
73. **Zhou, Z.,# Shuai, D.*** Photosensitized Electrospun Nanofibrous Filters for Capturing and Killing Airborne Coronaviruses under Visible Light Irradiation, ACS Fall Meeting, 08/2021. ORAL
72. **Li, M.,# Shuai, D.*** Radical-Driven Decomposition of Graphitic Carbon Nitride Nanosheets: Light Exposure Matters, ACS Fall Meeting, 08/2021. ORAL

71. **Shen, H.,# Shuai, D.*** Photoreactive Electrospun Filters for Controlling Airborne Transmission of SARS-CoV-2, 95th ACS Colloid and Surface Science Symposium, 06/2021. ORAL
70. **Li, M.,# Shuai, D.*** Dilemma of Activity and Stability: Intrinsic Photoreactivity Promotes 2D Nanomaterial Decomposition under Radical Attack, 95th ACS Colloid and Surface Science Symposium, 06/2021. ORAL
69. **Zhou, Z.,# Shuai, D.*** Single-Atom Catalysis for Oxidizing Contaminants of Emerging Concern via High-Valent Fe Species, 95th ACS Colloid and Surface Science Symposium, 06/2021. ORAL
68. **Zhang, M.,# Altan-Bonnet, N., Shuai, D.*** Emerging Pathogenic Unit of Vesicle-cloaked Murine Norovirus Clusters Is Resistant to Environmental Stresses and UV₂₅₄ Disinfection, International Society for Extracellular Vesicles Annual Meeting, USA, 05/2021. ORAL
67. **Zhang, M.,# Ghosh, S., Kumar, M., Santana, M., Chaimongkol, N., Altan-Bonnet, N., Shuai, D.*** Emerging Pathogenic Unit of Vesicle-cloaked Murine Norovirus Clusters Is Resistant to Environmental Stresses and UV₂₅₄ Disinfection, ACS Spring Meeting, USA, 04/2021. ORAL
66. **Shen, H.,# Shuai, D.,* Zhou, Z.,# Zhang, M.,# Shen, Y., Wang, H.#** Electrospun Nanofibrous Air Filters for Controlling Airborne Transmission of COVID-19, ACS Spring Meeting, USA, 04/2021. ORAL
65. **Shen, H.,# Shuai, D.,* Durkin, D. P., Aiello, A., Diba, T., Lafleur, J., Zara, J. M., Shen, Y.** Visible-light-responsive Graphitic Carbon Nitride/Chitosan Composite Films for Antimicrobial Packaging, ACS Spring Meeting, USA, 04/2021. ORAL
64. **Zhou, Z.,# Li, M.,# Kuai, C., Zhang, Y., Smith, V. F., Lin, F., Aiello, A., Durkin, D. P., Chen, H., Shuai, D.*** Rational Design of a Single-Atom Catalyst for Oxidizing Contaminants of Emerging Concern via High-Valent Fe Species, ACS Spring Meeting, USA, 04/2021. POSTER
63. **Li, M.,# Liu, D., Chen, X., Yin, Z., Shen, H.,# Aiello, A., McKenzie, K. R., Jiang, N., Li, X., Wagner, M. J., Durkin, D. P., Chen, H., Shuai, D.*** Radical-driven Decomposition of Graphitic Carbon Nitride: Light Exposure Matters, ACS Spring Meeting, USA, 04/2021. ORAL
62. **Shuai, D.*** Leveraging Nanotechnology for Controlling SARS-CoV-2 Transmission, MRS Fall Meeting, USA, 11/2020. ORAL, **Invited.**
61. **Shuai, D.*** Electrospun Nanofibrous Air Filters for Controlling COVID-19 Transmission, 9th Nano Conference, Virtual, 11/2020. ORAL, **Invited.**
60. **Zhang, M.,# Ghosh, S., Santana, M., Altan-Bonnet, N., Shuai, D.*** Vesicle-Cloaked Virus Clusters as Emerging Waterborne Pathogens: Persistence in Water and Wastewater, Fluids and Health 2019, Cargèse, Corsica, France, 07/2019. ORAL
59. **Zhang, M.,# Ghosh, S., Santana, M., Altan-Bonnet, N., Shuai, D.*** Vesicle-Cloaked Virus Clusters as Emerging Waterborne Pathogens: Persistence in Water and Wastewater, ASEMV Conference, Ptomac, MD, USA, 05/2019. POSTER
58. **Shen, H.,# Shuai, D.,*# Shen, Y.#** Visible-Light-Responsive Photocatalytic Nanomaterial Graphitic Carbon Nitride for Biofilm Control, AEESP Conference, Tempe, AZ, USA, 05/2019. (**‡ Co-corresponding Author**) ORAL
57. **Zhang, M.,# Ghosh, S., Santana, M., Altan-Bonnet, N., Shuai, D.*** Vesicle-Cloaked Virus Clusters as Emerging Waterborne Pathogens: Persistence in Water and Wastewater, AEESP Conference, Tempe, AZ, USA, 05/2019. POSTER
56. **Zheng, Q.,# Shuai, D.*** Sustainable onsite Hydrogen Peroxide Production from Water and Oxygen, AEESP Conference, Tempe, AZ, USA, 05/2019. POSTER
55. **Zheng, Q.,# Shuai, D.*** Chitosan Beads Packed Photocatalytic Reactor: Sustainable Platform for Water Purification under Solar Light Irradiation. ACS Spring Meeting, Orlando, FL, USA, 04/2019. ORAL
54. **Zheng, Q.,# Chen, H., Shuai, D.*** Sustainable Hydrogen Peroxide Production from Water and Oxygen by Graphitic Carbon Nitride (g-C₃N₄)-based Photocatalyst, ACS Spring Meeting, Orlando, FL, USA, 04/2019. ORAL

53. **Shen, H.,[#] Shuai, D.,^{*,†}** Shen, Y.[‡] Visible-light-responsive Photocatalyst of Graphitic Carbon Nitride for Biofilm Control, ACS Spring Meeting, Orlando, FL, USA, 04/2019. (**‡ Co-corresponding Author**) ORAL
52. **Zheng, Q.,[#] Shuai, D.*** Sustainable Solar-Driven H₂O₂ Production from H₂O and O₂, 2018 NSF Nanoscale Science and Engineering Grantees Conference, Alexandria, VA, USA, 12/2018. POSTER
51. **Shen, H.,[#] Shuai, D.,^{*,†}** Shen, Y.[‡] Visible-light-responsive Photocatalyst of Graphitic Carbon Nitride Nanomaterials for Pathogenic Biofilm Control, 2018 SNO Conference, Washington, DC, USA, 11/2018. (**‡ Co-corresponding Author**) ORAL
50. **Zheng, Q.,[#] Shuai, D.*** Sustainable Hydrogen Peroxide (H₂O₂) Production from H₂O and O₂, 2018 SNO Conference, Washington, DC, USA, 11/2018. ORAL
49. **López-Guerra, E. A.,[#] Shen, H.,[#] Solares, S. D.,[‡] Shuai, D.^{*,†}** Measuring the Viscoelastic Properties of Biofilms with 4D Atomic Force Microscopy, 8th ASM Conference on Biofilms, Washington, DC, USA, 10/2018. (**‡ Co-corresponding Author**) POSTER
48. **Shen, H.,[#] López-Guerra, E. A.,[#] Zhu, R.,[#] Diba, T., Zheng, Q.,[#] Solares, S. D., Zara, J. M., Shuai, D.,^{*,†}** Shen, Y.[‡] Visible-light-responsive Photocatalyst of Graphitic Carbon Nitride for Pathogenic Biofilm Control, 8th ASM Conference on Biofilms, Washington, DC, USA, 10/2018. (**‡ Co-corresponding Author**) POSTER
47. **Zheng, Q.,[#] Shuai, D.*** Sustainable Hydrogen Peroxide Production from Water, Air, and Sunlight, Gordon Research Conference: Environmental Sciences: Water, Holderness, NH, USA, 06/2018. POSTER
46. **Shen, H.,[#] López-Guerra, E. A.,[#] Diba, T., Solares, S. D., Zara, J. M., Shuai, D.*** Visible-light-responsive Graphitic Carbon Nitride Nanomaterials for Biofilm Control, Gordon Research Conference: Nanoscale Science and Engineering for Agriculture and Food Systems, South Hadley, MA, USA, 06/2018. POSTER
45. **Shen, H.,[#] López-Guerra, E. A.,[#] Diba, T., Solares, S. D., Zara, J. M., Shuai, D.*** Visible-light-responsive Graphitic Carbon Nitride Nanomaterials for Biofilm Control, Gordon Research Seminar: Nanoscale Science and Engineering for Agriculture and Food Systems, South Hadley, MA, USA, 06/2018. ORAL
44. **Zheng, Q.,[#] Chen, H., Shuai, D.*** Achieving Sustainable Water Purification: Tailored Graphitic Carbon Nitride for the Removal of Persistent Organic Contaminants, Gordon Research Conference: Nanoscale Science and Engineering for Agriculture and Food Systems, South Hadley, MA, USA, 06/2018. POSTER
43. **Ye, T.,[#] Durkin, D. P., Banek, N. A., Wagner, M. J., Shuai, D.*** Nitrogen-doped graphene Supported Pd-based Catalysts for Water Decontamination, ACS Spring Meeting, New Orleans, LA, USA, 03/2018. ORAL
42. **Shen, H.,[#] Shuai, D.*** Visible-Light-Responsive Photocatalytic Graphitic Carbon Nitride for Antimicrobial Applications, ACS Spring Meeting, New Orleans, LA, USA, 03/2018. ORAL
41. **Zheng, Q.,[#] Chen, H., Shuai, D.*** Tailored Graphitic Carbon Nitride: Smart Design of Visible-Light-Responsive Photocatalysts to Achieve Sustainable Water Treatment, ACS Spring Meeting, New Orleans, LA, USA, 03/2018. ORAL
40. **Zhu, R.,[#] Diaz, A., Shen, Y., Durkin, D. P., Sun, Y., Solares, S. D., Shuai, D.*** Mitigating of Humic Acid Fouling on Ultrafiltration Membranes in a Photocatalytic System, ACS Spring Meeting, New Orleans, LA, USA, 03/2018. ORAL
39. **Zheng, Q.,[#] Shuai, D.*** Smart Design of Graphitic Carbon Nitride for Photocatalytic Water Treatment under Visible Light Irradiation, PANNANO-2017, Guarujá, SP, Brazil, 11/2017. ORAL
38. **Shen, H.,[#] Shuai, D.*** Graphitic Carbon Nitride Nanomaterials for Sustainable Antimicrobial Applications, MoBE 2017, Washington, DC, USA, 10/2017. POSTER
37. **Shen, H.,[#] Shuai, D.*** Visible-Light-Responsive Photocatalytic Graphitic Carbon Nitride for Antimicrobial Applications, AEESP Conference, Ann Arbor, MI, USA, 06/2017. ORAL

36. **Zheng, Q.**,[#] Chen, H., **Shuai, D.*** Tailored Graphitic Carbon Nitride: Smart Design of Visible-Light-Responsive Photocatalysts to Achieve Sustainable Water Treatment, AEESP Conference, Ann Arbor, MI, USA, 06/2017. ORAL
35. **Ye, T.**,[#] **Shuai, D.*** Graphitic Carbon Nitride Supported Ultrafine Pd and Pd-Cu Catalysts for Contaminant Reduction, AEESP Conference, Ann Arbor, MI, USA, 06/2017. POSTER
34. **Zhu, R.**,[#] Diaz, A., Solares, S. D., **Shuai, D.*** Mitigating Humic Acid Fouling on a Photocatalytic Membrane System, AEESP Conference, Ann Arbor, MI, USA, 06/2017. POSTER
33. Durkin, D. P.,[†] **Ye, T.**,[‡] Choi, J., Livi, K. J. T., De Long, H. C., Trulove, P. C., Fairbrother, D. H., Haverhals, L. M.,[‡] **Shuai, D.*** Sustainable and Scalable Natural Fiber Welded Palladium-Indium Catalysts for Nitrate Reduction ([†] Equal Contribution, [‡] Co-corresponding Author), ACS Spring Meeting, San Francisco, CA, USA, 04/2017. ORAL
32. **Shen, H.**,[#] **Shuai, D.*** Antimicrobial Applications of Visible-Light-Responsive Photocatalysts, ACS Spring Meeting, San Francisco, CA, USA, 04/2017. ORAL
31. **Zhu, R.**,[#] Diaz, A., Solares, S. D., **Shuai, D.*** Evaluation of Photocatalytic Membrane Fouling by Humic Acid, ACS Spring Meeting, San Francisco, CA, USA, 04/2017. ORAL
30. **Zheng, Q.**,[#] **Shuai, D.*** Tailored Graphitic Carbon Nitride: The Selective Production of Reactive Oxygen Oxidative Species and Holes and Its Applications for Organic Micropollutants Removal, ACS Spring Meeting, San Francisco, CA, USA, 04/2017. ORAL
29. **Ye, T.**,[#] **Shuai, D.*** Reduction of Waterborne Contaminants on Graphitic Carbon Nitride Supported Pd-Based Catalysts, ACS Spring Meeting, San Francisco, CA, USA, 04/2017. ORAL
28. **Shuai, D.*** Graphitic Carbon Nitride (g-C₃N₄): Rational Design and Water Treatment Applications, ACS Fall Meeting, Philadelphia, PA, USA, 08/2016. ORAL
27. **Shuai, D.*** Achieving Sustainable Water Treatment: Graphitic Carbon Nitride for Persistent Waterborne Contaminant Removal with Visible Light Irradiation, ACS Spring Meeting, San Diego, CA, USA, 03/2016. ORAL
26. Durkin, D. P., **Ye, T.**,[#] Larson, E. G., Haverhals, L. M., Livi, K. J. T., De Long, H. C., Trulove, P. C., Fairbrother, D. H., **Shuai, D.*** Lignocellulose Fiber- and Welded Fiber- Supports for Palladium Based Catalytic Hydrogenation: A Natural Fiber Welding Application for Water Treatment, ACS Spring Meeting, San Diego, CA, USA, 03/2016. ORAL
25. **Zhu, R.**,[#] Diaz, A., Solares, S. D., **Shuai, D.*** A Mechanistic Study of the Physical, Chemical, and Mechanical Properties of Natural Organic Matter on Photocatalytic Membranes to Understand Fouling Mitigation, ACS Spring Meeting, San Diego, CA, USA, 03/2016. ORAL
24. **Zheng, Q.**,[#] **Shuai, D.*** Achieving Sustainable Water Treatment: Graphitic Carbon Nitride for Persistent Waterborne Contaminant Removal with Visible Light Irradiation, ACS Spring Meeting, San Diego, CA, USA, 03/2016. ORAL
23. **Ye, T.**,[#] **Shuai, D.*** Fabrication of Sustainable Pd-Carbon Nanofiber Catalysts by Electrospinning for Waterborne Contaminant Hydrogenation, ACS Spring Meeting, San Diego, CA, USA, 03/2016. ORAL
22. **Zheng, Q.**,[#] **Shuai, D.*** Achieving Sustainable Water Treatment: Graphitic Carbon Nitride for Persistent Waterborne Contaminant Removal with Visible Light Irradiation, AEESP Conference, New Haven, CT, USA, 07/2015. ORAL
21. **Ye, T.**,[#] **Shuai, D.*** Facile and Sustainable Production of Catalysts for Water Purification: Facile Electrospinning Fabrication of Pd-Carbon Nanofiber Catalysts for Waterborne Contaminant Reduction, AEESP Conference, New Haven, CT, USA, 07/2015. POSTER
20. **Zheng, Q.**,[#] **Shuai, D.*** Visible-Light-Responsive Graphitic Carbon Nitride for Photocatalytic Degradation of Persistent Waterborne Contaminants, ACS Spring Meeting, Denver, CO, USA, 03/2015. ORAL
19. **Ye, T.**,[#] **Shuai, D.*** Fabrication of Sustainable Pd-Carbon Nanofiber Catalysts by Electrospinning for Waterborne Contaminant Hydrogenation, ACS Spring Meeting, Denver, CO, USA, 03/2015. ORAL

18. **Shuai, D.**, Greenstein, K. E., Cwiertny, D. M. Development and Application of Piezocatalysts for Advanced Oxidation Processes and Disinfection in Water Treatment, ACS Spring Meeting, Dallas, TX, USA, 03/2014. ORAL
17. Cwiertny, D. M., **Shuai, D.**, Myung, N. V. Exploration of Harvesting Heat and Mechanical Vibration to Drive Advanced Oxidation Processes for Water Treatment, ACS Fall Meeting, Indianapolis, IN, USA, 09/2013. ORAL
16. **Shuai, D.**, Cwiertny, D. M., Myung, N. V. Exploration of Harvesting Heat and Mechanical Vibration to Drive Advanced Oxidation Processes for Water Treatment, AEESP Conference, Denver, CO, USA, 07/2013. ORAL
15. **Shuai, D.**, Myung, N. V., Cwiertny, D. M. Synthesis of Pyroelectric and Piezoelectric Catalysts to Use Waste Energy for Water Treatment, Gordon Conference Environmental Nanotechnology, Stowe, VT, USA, 06/2013. POSTER
14. **Shuai, D.**, Greenstein, K. E., Nalbandian, M. J., Myung, N. V., Cwiertny, D. M. Electrospun Photocatalytic TiO₂ Nanofiber Composites with Enhanced Performance for Water Treatment, ACS Spring Meeting, New Orleans, LA, USA, 04/2013. ORAL
13. **Shuai, D.**, McCalman, D. C., Shapley, J. R., Schneider, W. F., Werth, C. J. Structure Sensitivity Study of Waterborne Contaminant Hydrogenation Using Shape- and Size- Controlled Pd Nanoparticles, ACS Fall Meeting, Philadelphia, PA, USA, 08/2012. ORAL
12. **Shuai, D.**, McCalman, D. C., Shapley, J. R., Schneider, W. F., Werth, C. J. Structure Sensitivity Study of Waterborne Contaminant Hydrogenation Using Shape- and Size- Controlled Pd Nanoparticles, ACS Spring Meeting, San Diego, CA, USA, 03/2012. ORAL
11. **Shuai, D.**, Choe, J. K., Shapley, J. R., Werth, C. J. Enhanced Activity and Selectivity of Carbon Nanofiber (CNF) Supported Pd Catalysts for Nitrite Reduction, AEESP Conference, Tampa, FL, USA, 07/2011. ORAL
10. **Shuai, D.**, Choe, J. K., Shapley, J. R., Schneider, W. F., Werth, C. J. Activity and Selectivity of CNF Supported Pd Catalysts for Nitrite Reduction, NANO 2010, Clemson, SC, USA, 08/2010. ORAL
9. **Shuai, D.**, Shapley, J. R., Werth, C. J. Activity and Selectivity Study of CNF Supported Pd-Based Catalysts for Nitrate Reduction, ACS Spring Meeting, San Francisco, CA, USA, 03/2010. ORAL
8. **Shuai, D.**, Chaplin, B. P., Shapley, J. R., Menendez, N., Schneider, W. F., Werth, C. J. Azo Dye Enhancement of Oxyanion and Diatrizoate Reduction Kinetics on Pd-Based Catalysts, AEESP Conference, Iowa City, IA, USA, 07/2009. ORAL
7. **Shuai, D.**, Chaplin, B. P., Shapley, J. R., Menendez, N., Schneider, W. F., Werth, C. J. Azo Dye Enhancement of Oxyanion and Diatrizoate Reduction Kinetics on Pd-Based Catalysts, MRS Spring Meeting, San Francisco, CA, USA, 04/2009. ORAL
6. **Shuai, D.**, Shapley, J. R., Werth, C. J. Nitrate Reduction on Carbon Nanotube Supported Pd-Based Catalysts, MRS Spring Meeting, San Francisco, CA, USA, 04/2009. POSTER
5. Deng, S., **Shuai, D.**, Yu, Q., Huang, J., Yu, G. Removal of Perfluorooctane Sulfonate by Molecularly Imprinted Polymeric Adsorbents, IWA World Water Congress and Exhibition, Vienna, Austria, 09/2008. POSTER
4. Deng, S., **Shuai, D.**, Yu, Q., Yu, G. Selective Removal of Perfluorooctane Sulfonate by Molecularly Imprinted Polymeric Adsorbents, Leading Edge Technology 2008, Zurich, Switzerland, 06/2008.
3. **Shuai, D.**, Wojnar, S., Chaplin, B. P., Shapley, J. R., Werth, C. J. Effects of Methyl Orange on Nitrate Reduction by a Pd-In/ γ -Al₂O₃ Catalyst, ACS Spring Meeting, New Orleans, LA, USA, 04/2008. ORAL and POSTER
2. Deng, S., Yu, Q., **Shuai, D.**, Yu, G. Adsorption of Perfluorooctane Sulfonate by Two Novel MIP Adsorbents, the 1st Korea-China Symposium on Persistent Organic Pollutants, Pohang, Korea, 08/2007.
1. Yang, B., Yu, G., **Shuai, D.** Electrocatalytic Hydrodechlorination of 4-Chlorobiphenyl in Aqueous Solution Using Palladized Nickel Foam Cathodes, Dioxin 2006, Oslo, Norwegian, 08/2006.

INVITED PRESENTATIONS

33. **Shuai, D.** Advanced Materials for Water-Energy-Health Nexus, Department of Civil, Construction and Environmental Engineering, Iowa State University, IA, USA, 01/2020.
32. **Shuai, D.** Advanced Materials for Water-Energy-Health Nexus, Department of Chemistry, University of Illinois at Chicago, IL, USA, 01/2020.
31. **Shuai, D.** Advanced Materials for Water-Energy-Health Nexus, Department of Applied Chemistry, University of Science and Technology of China, China, 12/2019.
30. **Shuai, D.** Advanced Materials for Water-Energy-Health Nexus, School of Environmental Science and Engineering, Southern University of Science and Technology, China, 08/2019.
29. **Shuai, D.** Advanced Materials for Water-Energy-Health Nexus, Institute of Advanced Technology, Westlake University, China, 08/2019.
28. **Shuai, D.** Advanced Materials for Water-Energy-Health Nexus, College of Environmental and Resource Sciences, Zhejiang University, China, 08/2019.
27. **Shuai, D.** Advanced Materials for Water-Energy-Health Nexus, Department of Civil Engineering, Stony Brook University, Stony Brook, NY, USA, 05/2019.
26. **Shuai, D.** Advanced Materials for Food-Energy-Water Nexus, Department of Biological Systems Engineering, Virginia Tech, Blacksburg, VA, USA, 05/2019.
25. **Shuai, D.** Advanced Materials for Water-Energy-Health Nexus, Department of Civil, Architectural and Environmental Engineering, University of Miami, Miami, FL, USA, 04/2019.
24. **Shuai, D.** Advanced Materials for Water-Energy-Health Nexus, Department of Civil, Architectural and Environmental Engineering, University of Texas at Austin, Austin, TX, USA, 03/2019.
23. **Shuai, D.** Advanced Materials for Water-Energy-Health Nexus, Department of Civil and Environmental Engineering, University of Wisconsin-Madison, Madison, WI, USA, 02/2019.
22. **Shuai, D.** Advanced Materials for Water-Energy-Health Nexus, Department of Energy, Environmental & Chemical Engineering, Washington University in St. Louis, St. Louis, Mo, USA, 01/2019.
21. **Shuai, D.** Advanced Materials for Water-Energy-Health Nexus, Department of Chemistry, University of New Orleans, New Orleans, LA, USA, 10/2018.
20. **Shuai, D.** Advanced Materials for Water-Energy-Health Nexus, Department of Civil and Environmental Engineering, University of Pittsburgh, Pittsburgh, PA, USA, 02/2018.
19. **Shuai, D.** Advanced Materials for Water-Energy-Health Nexus, Department of Civil, Environmental and Architectural Engineering, University of Kansas, Lawrence, KS, USA, 01/2018.
18. **Shuai, D.** Advanced Materials for Water-Energy-Health Nexus, Department of Civil & Environmental Engineering & Earth Sciences, University of Notre Dame, Notre Dame, IN, USA, 11/2017.
17. **Shuai, D.** Advanced Materials for Water-Energy-Health Nexus, Department of Chemical, Biochemical and Environmental Engineering, University of Maryland, Baltimore County, Baltimore, MD, USA, 11/2017.
16. **Shuai, D.** Advanced Materials for Water-Energy-Health Nexus, Department of Civil, Environmental, and Architectural Engineering, University of Colorado Boulder, Boulder, CO, USA, 09/2017.
15. **Shuai, D.** Advanced Materials for Water-Energy-Health Nexus, Department of Civil and Environmental Engineering, Colorado School of Mines, Golden, CO, USA, 09/2017.
14. **Shuai, D.** Advanced Materials for Water-Energy-Health Nexus, Department of Civil and Environmental Engineering, Michigan State University, East Lansing, MI, USA, 07/2017.
13. **Shuai, D.** Advanced Materials for Water-Energy-Health Nexus, Institute of Mass Spectrometer and Atmospheric Environment, Jinan University, Guangzhou, China, 06/2017.

12. **Shuai, D.** Advanced Materials for Water-Energy-Health Nexus, Department of Civil, Environmental, and Geo- Engineering, University of Minnesota, Twin Cities, MN, USA, 04/2017.
11. **Shuai, D.** Advanced Materials for Water-Energy-Health Nexus, Department of Civil and Environmental Engineering, Rutgers University, NJ, USA, 03/2017.
10. **Shuai, D.** Advanced Materials for Water-Energy-Health Nexus, Department of Civil and Environmental Engineering, University of Maryland, College Park, MD, USA, 02/2017.
9. **Shuai, D.** Advanced Materials for Sustainable Water Purification, Department of Environmental Engineering and Earth Sciences, Clemson University, SC, USA, 11/2016.
8. **Shuai, D.** Achieving Water Sustainability through Innovative Materials-Based Treatment Strategies, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, Beijing, China, 07/2016.
7. **Shuai, D.** Achieving Water Sustainability through Innovative Materials-Based Treatment Strategies, School of Environment, Tsinghua University, Beijing, China, 07/2016.
6. **Shuai, D.** Achieving Water Sustainability through Innovative Materials-Based Treatment Strategies, College of Environmental Sciences and Engineering, Peking University, Beijing, China, 07/2016.
5. **Shuai, D.** Achieving Water Sustainability through Innovative Materials-Based Treatment Strategies, Department of Chemical, Biological, and Pharmaceutical Engineering, New Jersey Institute of Technology, Newark, NJ, USA, 04/2015.
4. **Shuai, D.** Achieving Water Sustainability through Innovative Materials-Based Treatment Strategies, Department of Geography and Environmental Engineering, Johns Hopkins University, Baltimore, MD, USA, 09/2014.
3. **Shuai, D.** Achieving Water Sustainability through Innovative Materials-Based Treatment Strategies, Department of Civil and Environmental Engineering, Temple University, Philadelphia, PA, USA, 09/2014.
2. **Shuai, D.** Achieving Water Sustainability through Innovative Materials-Based Treatment Strategies, Department of Civil and Environmental Engineering, Virginia Tech, Blacksburg, VA, USA, 04/2014.
1. **Shuai, D.** Achieving Water Sustainability through Innovative Materials-Based Treatment Strategies, Department of Civil and Environmental Engineering, New Jersey Institute of Technology, Newark, NJ, USA, 10/2013.

PATENTS

3. Anti-microbial Multilayer Fabric Media and Method for Making Same, provisional application submitted. 63/201,247. 4/20/2021
2. Oxygen and Nitrogen Functionalized Carbonaceous Supports with Improved Nanoparticle Dispersion, and Methods of Making and Uses of the Same, 11,413,603, 8/16/2022
1. Doped Graphitic Carbon Nitrides, Methods of Making and Uses of the Same, 10,661,257, 5/26/2020

TEACHING

CE 3520: Environmental Engineering I: Water Resources and Water Quality, 2014-2020 Spring, 2022 Spring

CE 6501: Environmental Chemistry, 2016 Spring, 2016-2019 Fall

CE 6501: Aquatic Chemistry, 2022 Fall

CE 6503: Principles of Environmental Engineering, 2013-2019 Fall, 2021-2022 Fall

CE 6504: Water and Wastewater Treatment, 2017-2020 Spring

CE 6507: Advanced Technologies in Environmental Engineering, 2022 Spring

CE 6800: Emerging Technologies in Environmental Engineering, 2015 Fall

Awarded **Certificate** by The Faculty Learning Community for Junior Faculty, The George Washington University, 04/2015.

Awarded **Certificate in Foundations of Teaching**, University of Illinois at Urbana-Champaign, 04/2012.

SERVICE

Departmental Service, GW

Served as the undergraduate faculty advisor, 2017-Present. Listed alphabetically:

- Alexander Jasper
- Alphonso Bonds
- Brian Toscano
- Emilia Schmidt
- Finn Lillis
- Hana Wael Kilani
- Jad Bdeir
- Jefferson McGough
- Josephine Teat
- Khala Antoine
- Khalid Abanumay
- Kwame Bonsu
- Lauren Bradley
- Marcus Giff
- Noah Leslie
- Noelle Dwyer
- Pengyu Chen
- Steven Brunetto
- Thomas Arena
- Yoon Sil Choi

Served as a member of the CEE laboratory committee, 2013-2020.

Served as a member of the CEE ABET committee, 2018-2019.

Served as a member of the CEE faculty personnel committee, 2019-Present.

Served as a member of the CEE professor of practice search committee, 2020.

Served as a member of the CEE graduate programs committee, 2021-Present.

Mentor for undergraduate capstone course, 2016.

- The group of Elizabeth Manning, Jennifer Muething, and Ian Wong was the recipient of 2016 Pelton Senior Design Competition Green Award.

Served as a member of the doctoral qualifying exam committee, 2013-Present. Listed chronologically:

- Boxiao Cao
- Qinmin Zheng
- Tao Ye
- Ruochen Zhu
- Yuanfei Bi
- Arifur Rahman
- Abedeh Abdolghafoorian
- Baoqiang Li
- Hongchen Shen
- Mahmudul Hasan
- Parisa Heidary
- Mojolaoluwa Ladipo-Obasa
- Mengyang Zhang
- Zhe Zhou
- Mengqiao Li

- Lingchen Kong
- Xun Guan

Served as a member of the thesis and dissertation committee, 2013-Present. Listed chronologically:

- Taqsim Husnain
- Nuruol S. Mohd
- David J. Rigby
- Baoqiang Li (M.S.)
- Arifur Rahman
- Mahmudul Hasan
- Yuanfei Bi
- Elizabeth Manning
- Tao Ye
- Yusi Li
- Priyanka Ali
- Munshi Md. Rasel
- Qinmin Zheng
- Boxiao Cao
- Jianxin Chen
- Wenjing Shi
- Baoqiang Li (Ph.D.)
- Nicole Forney
- Yarong Qi
- Ruochen Zhu
- Hongchen Shen
- Mengyang Zhang
- Mengqiao Li
- Zhe Zhou

School Service, GW

Judge, 2016 School of Engineering and Applied Sciences Research & Development Showcase

Floor marshal, 2014 School of Engineering and Applied Sciences Graduation Ceremony

Floor marshal, 2018 School of Engineering and Applied Sciences Graduation Ceremony

Reader, 2022 School of Engineering and Applied Sciences Graduation Ceremony

Served as a member of the research awards selection committee, 2022 School of Engineering and Applied Sciences Faculty Awards

Served as a member of the thesis and dissertation committee, 2013-Present. Listed chronologically:

- Yuan Xiang (MAE, GW)
- Alfredo Diaz Gonzalez (MAE, GW)
- Enrique A. López-Guerra (MAE, GW)
- Jungjoon Ahn (MAE, GW)
- Berkin Uluutku (MAE, GW)

University Service, GW

Served as a member of the general service evaluation committee, 2021-2022.

Serving as a member of the institutional biosafety committee, 2023-Present.

Professional Service

Editor, Journal of Hazardous Materials, 01/2022-Present.

Associate Editor, Journal of Hazardous Materials, 06/2019-12/2021.

Highlights editor, Environmental Science: Water Research & Technology, 03/2015-05/2016.

Journal reviewer. 2007-Present. Listed alphabetically:

- ACS Applied Materials & Interfaces
- ACS ES&T Engineering
- ACS Sustainable Chemistry & Engineering
- Applied Catalysis A: General
- Applied Catalysis B: Environmental
- Chemical Engineering Journal
- Chemical Reviews
- Colloids and Surfaces B: Biointerfaces
- ECS Journal of Solid State Science and Technology
- Environment International
- Environmental Engineering Science
- Environmental Science: Nano
- Environmental Science: Processes & Impacts
- Environmental Science & Technology
- Environmental Science & Technology Letters
- Environmental Science: Water Research & Technology
- Frontiers of Environmental Science and Engineering
- Industrial & Engineering Chemistry Research
- International Journal of Chemical Kinetics
- International Journal of Energy Research
- iScience
- Journal of Chemical Technology & Biotechnology
- Journal of Colloid and Interface Science
- Journal of Membrane Science
- RSC Advances
- The Science of the Total Environment
- Scientific Reports
- Small
- Water Environment Research
- Water Research

Grant proposal reviewer, 2013-Present. Listed alphabetically:

- ACS Petroleum Research Fund
- National Science Foundation
- Research Growth Initiative, the University of Wisconsin-Milwaukee
- The National Academies of Science, Engineering, and Medicine
- US Department of Agriculture-National Institute of Food and Agriculture
- Environmental Research and Education Foundation

Symposium organizer and session chair, 2015-Present. Listed chronologically:

- Symposium co-organizer, *Microalgae: A Renewable Energy Source and a Sustainable Solution for the Environment*, Division of Environmental Chemistry, ACS Spring 2015 National Meeting, Mar 22–26, 2015, Denver, CO, USA.
- Symposium co-organizer, *Innovative Materials & Technologies for Water Purification*, Division of Environmental Chemistry, ACS Spring 2016 National Meeting, Mar 13–17, 2016, San Diego, CA, USA.
- Symposium co-organizer, *Water-Energy Nexus*, Division of Energy and Fuels, ACS Fall 2016 National Meeting, Aug 21–25, 2016, Philadelphia, PA, USA.
- Symposium co-organizer, *Innovative Materials & Technologies for Water Purification*, Division of Environmental Chemistry, ACS Spring 2017 National Meeting, Apr 2–6, 2017, San Francisco, CA, USA.

- Symposium co-organizer, *Themed Session: Advanced Materials for Detection and Control of Chemical and Biological Contaminants*, 2017 Association of Environmental Engineering and Science Professors (AEESP) Conference, Jun 20-22, Ann Arbor, MI, USA.
- Symposium co-organizer, *Innovative Chemical & Material Processes for Sustainable Water Purification*, Division of Environmental Chemistry, ACS Spring 2018 National Meeting, Mar 18–22, 2018, New Orleans, LA, USA.
- Symposium co-organizer, *Surface Science and Catalysis*, 95th ACS Colloid and Surface Science Symposium, Jun 14-16, 2021, USA.

Served as a member of the doctoral qualifying exam committee, 2013-Present. Listed chronologically:

- Dian Zhang (CEE, VT)
- Yewei Sun (CEE, VT)

Served as a member of the thesis and dissertation committee, 2013-Present. Listed chronologically:

- Nastaran Jadbabaei (CEE, Temple University)
- David P. Durkin (Chemistry, JHU)
- Mamatha Hopanna (CBEE, UMBC)
- Dian Zhang (CEE, VT)
- Yewei Sun (CEE, VT)
- Zhonghao Wan (CEE, Hong Kong Polytechnic University)
- Bei Ye (Tsinghua Shenzhen International Graduate School)

Judge, 2016 ASCE Sustainable Development Award, 04/2016.

Judge, 2014 ASCE Sustainable Development Award, 04/2014.

Membership Committee Chair, Chinese-American Professors in Environmental Engineering and Science, 03/2015-07/2020.

Assistant, facilitating discussions on AEESP policy statement, 07/2011.

Organizer, Advanced Courses for Drinking Water and Wastewater Treatment Technologies, Department of Environmental Sciences and Engineering, Tsinghua University, 2005-2007.

Community Service

Served as a research mentor for outreach activities, 2015-Present. Listed chronologically:

- Adam Workineh (School Without Walls, Washington, D.C., 2015 Spring)
- Arin Black (McKinley Technology High School, Washington, D.C., 2016 Spring)
- Lourdes Puig (School Without Walls, Washington, D.C., 2016 Spring)
- Nira Nair (Thomas Jefferson High School for Science and Technology, Alexandria, VA, 2017 Summer)
- Ashley Hawkins (Harpeth Hall School, Nashville, TN, 2018 Spring)
- Colleen Choi (Thomas Jefferson High School for Science and Technology, Alexandria, VA, 2018 Summer)
- Francesca Gastaldo (School Without Walls, Washington, D.C., 2019 Fall)
- Wyatt Steel (Nysmith School, 2022 Fall)

ADVISEES

Postdoctoral Researcher

- Dr. Enrique A. López-Guerra (2018 Summer-2019 Spring), Currently as a technical support engineer at Park Systems Corp.

Ph.D. Students

- Tao Ye (2014 Spring-2018 Summer), Currently as an assistant professor in the Department of Civil and Environmental Engineering at the South Dakota School of Mines & Technology.
- Qinmin Zheng (2014 Fall-2019 Fall), Currently as a postdoctoral researcher at the MIT Senseable City Lab.
- Ruo Chen Zhu (2015 Fall-2021 Fall)
- Hongchen Shen (2016 Fall-2021 Fall), Currently as a postdoctoral researcher in the Department of Civil and Environmental Engineering at Rice University.

- Mengyang Zhang (2018 Spring-2021 Fall), Currently as a postdoctoral researcher in the Department of Civil and Environmental Engineering at Stanford University.
- Mengqiao Li (2019 Spring-2022 Fall)
- Zhe Zhou (2019 Fall-Present)
- Jiahao Chen (2020 Fall-Present)
- Rui Fu (2022 Spring-Present)
- Zhenzhen He (2022 Fall-Present)
- Li Qian (2022 Fall-Present), co-advised with Dr. Yun Shen
- Hongyue Zhang (2022 Fall-Present), co-advised with Dr. Yun Shen
- Jia Fu (2023 Spring-Present)

M.S. Students

- Zhe Zhou (2017 Fall-2019 Spring), Currently as a Ph.D. student in Civil and Environmental Engineering at The George Washington University.
- Yusi Li (2017 Fall-2019 Summer), Currently as a Ph.D. student in Chemical Engineering at Arizona State University.

Undergraduates

- Suty Komsonkeo (Class of 2015)
- Elizabeth Manning, Jennifer Muething, and Ian Wong for CEE Senior Design (Class of 2016)
- Michaela Stanch (Class of 2017)
- Jiangnan Lu (Class of 2018)
- Khalid Alsadhan (Class of 2018)
- Kayla Tarr (Class of 2019), Currently as a Ph.D. student in the School of Sustainability at Arizona State University.
- Yoon Sil Choi (Class of 2020), Currently as a M.S. student in the Department of Mechanical Engineering at Johns Hopkins University.
- Trinh Ton (Class of 2021)

Visiting Scholars

- Yingxue Sun (2015-2016, Beijing Technology and Business University, China)
- Chi Zhang (2018, Hohai University, China)

Others

- Haihuan Wang (2020 Summer-2021 Summer)

HONORS AND AWARDS RECEIVED BY ADVISEES

Ph.D. Students

Mengqiao Li, Recipient of 2022 AEESP Conference Student Travel Award, 04/2022.

Zhe Zhou, Recipient of The Chemical Society of Washington (ACS) Student Travel Award, 02/2022.

Hongchen Shen, Recipient of ACS ENVR Graduate Student Award, 01/2022.

Hongchen Shen, Recipient of 2021 SNO Conference Student Award, 11/2021.

Mengqiao Li, Recipient of 2021 SNO Conference Student Award, 11/2021.

Mengqiao Li, Recipient of The Chemical Society of Washington (ACS) Student Travel Award, 08/2021.

Mengqiao Li, Recipient of ACS ENVR C. Ellen Gonter Environmental Chemistry Award, 04/2021.

Qinmin Zheng, Recipient of ACS ENVR Graduate Student Award, 02/2019.

Qinmin Zheng, Recipient of 2018 SNO Conference Student Award, 09/2018.

Hongchen Shen, Recipient of AccelerateGW I-Corps Site Program Grants, GW SEAS Student Research and Development Showcase, 02/2018.

Tao Ye, Recipient of The Chemical Society of Washington (ACS) Student Travel Award, 02/2018.

Tao Ye, Recipient of Dewberry Scholarship, Department of Civil and Environmental Engineering, The George Washington University, 08/2017.

Hongchen Shen, Recipient of 2017 AEESP Conference Stantec Student Travel Award, 06/2017.

Qinmin Zheng, Recipient of 2017 CAPEES Founding President Best Paper Award, 04/2017.

Ruochen Zhu, Recipient of The Chemical Society of Washington (ACS) Student Travel Award, 02/2017.

Hongchen Shen, Runner-up Prize, GW SEAS Student Research and Development Showcase, 02/2017.

Qinmin Zheng, 2nd Place of Graduate Student Experimental Research Prize, GW SEAS Student Research and Development Showcase, 02/2017.

Qinmin Zheng, Recipient of GW Conference Travel Grant for Graduate Students, 02/2017.

Tao Ye, Recipient of ACS ENVR Graduate Student Award, 02/2017.

Qinmin Zheng, Recipient of The Chemical Society of Washington (ACS) Student Travel Award, 02/2016.

Tao Ye, Runner-up of 2015 GW Research Days Best Poster Presentation Award, 03/2015.

Tao Ye, Recipient of The Chemical Society of Washington (ACS) Student Travel Award, 02/2015.

Undergraduate Students

Kayla Tarr, Recipient of 2019 ACS ENVR Undergraduate Student Award, 05/2019.

Yoon Sil Choi, Recipient of 2019 GW SEAS Summer Undergraduate Program for Engineering Research Grant, 04/2019.

Yoon Sil Choi, Recipient of 2019 American Society of Civil Engineers-Virginia's Student Conference Marr Technical Paper Award, 2nd place, 03/2019.

Yoon Sil Choi, Recipient of 2019 GW Undergraduate Sustainability Scholars Award, 01/2019.

Yoon Sil Choi, Recipient of 2018 GW Undergraduate Research Award, 05/2018.

Yoon Sil Choi, Recipient of 2018 American Society of Civil Engineers-National Capital Section Hathaway Memorial Award/Scholarship, 03/2018.

Khalid Alsadhan, Recipient of 2017 American Society of Civil Engineers-Virginia's Student Conference Hardy Cross Competition Award, 3rd place, 03/2017.

Elizabeth Manning, Jennifer Muething, and Ian Wong, Recipients of 2016 Pelton Senior Design Competition Green Award, 05/2016.

Suty Komsonkeo, Recipient of 2014 GW Undergraduate Research Assistantship Fund, 01/2014.

PROFESSIONAL AFFILIATIONS

Member of American Chemical Society

Member of Association of Environmental Engineering and Science Professors

Member of Chinese-American Professors in Environmental Engineering and Science

Member of Materials Research Society